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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>02 February 2005</u>.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-5,7-24,26-43 and 45-78</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-5,7-24,26-43 and 45-78</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   The amendment was received on February 2, 2005.

2.   Claims 6, 25 and 44 have been cancelled.

3.   Claims 1-5, 7-24, 26-43 and 45-78 are pending in this application.

4.   There are some 35 U.S.C. 101 issues, which are stated in detail below.

Response to Arguments

5.   Applicants' arguments filed on February 2, 2005 (Remarks pages 15-19 have been fully

considered but they are not persuasive.

Applicants' state on bottom of page 15 and top of page 16 that the basic requirements for

establishing a *prima facie* cases of obviousness are not met. Please note that the examiner has provided

where each limitation recited in the claims are located in the reference of Zhao and Navarre along with a

motivation and the reason for the combination. Please see in the rejection below where the motivation

and obviousness is presented.

Applicants' state on page 17:

"The present application describes a non-limiting embodiment of the invention on page 18, lines 8-13, in
which watermark information is received from the printing entity. For example, the application notes that
the information can be the printer's serial number, the location of the printer, and/or the time and date to be
printed to a printing engine. The cited references do not disclose such a feature."

Please note that the examiner did not give these features any weight because they are not recited

in the claims (at least the independent claims). Applicants' arguments regarding "information" are

unconvincing. These components are not recited in the claims.

Applicants further argue starting at bottom of page 17:

"The Zhao et al. reference does not disclose a merge command to a printing entity requesting that a
document be printed with watermark information received from the printing entity, or merging a document
with watermark information received from a printing entity and transmitting the document merged with the
watermark information to the printing entity, as recited in Claims 1, 20, 39, 58, 65, and 72 of the present
application."

As stated in the previous office action Zhao et al. discloses merge command at col. 6, lines 44-49. Zhao et al explain that the digital representation may contain a fingerprint watermark to identify the user when it is sent from the copy server to the copy client in column 7, lines 1-13. Zhao et al further explain that the fingerprint watermark remains in the digital representation as long as it is present in the copy client in column 8, lines 1-3. Thus, if the fingerprint watermark is present in the digital representation, then the representation will be printed with the watermark by the copy client. Zhao et al. discloses having a display device such as printer, which decodes the coped digital representations. Further Zhao et al. teaches the process of reading the watermark by watermark reader 123…by having use information 129…which returns them to copy servers 103…to a display device or a printer (See, col. 4 line 63 to col. 5 line 15).

Applicants' state on page 18:

"The Navarre et al. does not discuss watermarks or the printing of the document. Thus, the Navarre et al. reference clearly does not disclose or even suggest the receipt of watermark information from a printing entity."

The examiner in the previous office action has never admitted of this. See the rejection below.

6.   Applicant's arguments with respect to Navarre et al. have been considered but are moot in view of the response to the arguments regarding Zhao et al.

Claim Rejections - 35 USC § 101

7.   35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8.   Claims 39-43, 45-47 and 73-78 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 39 and 72 are drawn to functional descriptive material NOT claimed as residing on a computer readable medium. MPEP 2106.IV.B.1(a) (Functional Descriptive Material) states:

"Data structures not claimed as embodied in a computer-readable medium are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer."

"Such claimed data structures do not define any structural or functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized."

Claims 39 and 72, while defining a computer program product does not define a "computer-readable medium" and is thus non-statutory for that reasons. A computer program product can range from paper on which the program is written, to a program simply contemplated and memorized by a person. The examiner suggests amending the claim to embody the program on "computer-readable medium" in order to make the claim statutory.

"In contrast, a claimed computer-readable medium encoded with the data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory." - MPEP 2106.IV.B.1(a)

Claims 40-43, 45-47 and 73-78 are rejected for the same reasons.

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10.   Claims 1-4, 7-12, 15-18, 20-23, 26-31, 34-37, 39-42, 45-50, 53-56, 58-63, 65-70, and 72-77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhao et al (US 6,141,753) in view of Navarre et al (US 6,442,611).

With regard to **claim 20** Zhao in view of Navarre discloses,

Means for receiving a request, at a centralized document manager, a request for a document from a remote user is not explicitly explained by Zhao et al. Zhao et al explain in column 6, lines 34-36 and illustrate in figure 1 that a transaction manager 115 receives a request for a document (original digital representation) from both the copy client 119(i) (remote user) and the distributed arrangement 117. However, Zhao et al do not explicitly explain that the request is received at a centralized document manager. Navarre et al illustrate a centralized gateway 220 (corresponding to a centralized document manager) receiving requests from a client application 210 (corresponding to a remote user) in figure 210. Navarre et al illustrate that the request is sent from a client application to the gateway in figure 3 by reference number 310.

Means for selecting, using the centralized document manager, an application service provider amongst a plurality of application service providers is not explicitly explained by Zhao et al. Zhao et al explain in column 6, lines 50-54 that a copy server 103(j) (corresponding to an application service provider) is selected based on the user request. Zhao et al also explain that multiple copy servers are possible in column 3, lines 24-27. In order to access a copy server 103(j) as illustrated in figure 1, it is inherent that the system of Zhao et al would have to select a copy server amongst the plurality of copy servers. Nevertheless, Navarre et al illustrate that the gateway 220 is connected to a plurality of server applications 230, 240, and 250 (corresponding to application service providers) in figure 2. Navarre et al illustrate that a request is associated with a specific server application in figure 3 by reference number 320.

Means for forwarding the request to the selected application service provider is illustrated by Zhao et al in figure 1 by NWREQ (147). Navarre et al illustrate transmitting the request to the respective application in figure 3 by reference number 330.

Means for retrieving the document from the selected application service provider is illustrated by Zhao et al in figure 1 by FRESP (145) and explained in column 6, line 60 to column 7, line 13. Navarre

et al illustrate receiving a response from the respective server application in figure 3 by reference number 340.

Means for sending a merge command to a printing entity requesting that the document be printed with watermark information is explained by Zhao et al in column 6, lines 44-49. One kind of use for the digital representation of the work is explained to be printing in the copy client. Zhao et al explain that the digital representation may contain a fingerprint watermark to identify the user when it is sent from the copy server to the copy client in column 7, lines 1-13. Zhao et al further explain that the fingerprint watermark remains in the digital representation as long as it is present in the copy client in column 8, lines 1-3. Thus, if the fingerprint watermark is present in the digital representation, then the representation will be printed with the watermark by the copy client. Further Zhao et al. teaches the process of reading the watermark by watermark reader 123...by having use information 129...which returns them to copy servers 103...to a display device or a printer (See, col. 4 line 63 to col. 5 line 15).

Both the systems of Zhao et al ("secure distribution of digital representations" in the abstract) and Navarre et al ("End users of the gateway 220 can be authorized to access one or more services through the use of security profiles" in column 4, lines 47-51) are directed towards distributing data securely. Navarre et al explain that the gateway 220 (corresponding to a centralized document manager) can incorporate security functionality and prevents direct connection between a client application and the server applications, thereby acting as a firewall in column 4, line 47 to column 5, line 2. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to receive a request from a remote user at a centralized document manager and select an application service provider amongst a plurality of application service providers based on the request, as suggested by Navarre et al, in

the system of Zhao et al because the security of transfer of digital works from an application

service provider to a user would be increased and the possibility of piracy would be decreased.

Claim 1 recites identical features as claim 20 except claim 1 is a method claim. Thus, arguments

similar to that presented above for claim 20 is equally applicable to claim 1.

Claim 39 recites identical features as claim 20 except claim 39 is a computer program product

claim. Thus, arguments similar to that presented above for claim 20 is equally applicable to claim 39.

Referring to **claim 21**, which is representative of **claims 2 and 40**, a means for transmitting the

watermark information to the printing entity is explained by Zhao et al in column 7, lines 11-22. Zhao et

al explain that the encrypted digital representation, the encrypted keys, and the encrypted use information

are sent to the copy client. Zhao et al then explain that the second encryption key sent to the copy client

may be used as the identifying information in the fingerprint watermark. Thus, the watermark

information is sent to the printing entity (corresponding to the copy client).

Referring to **claim 22**, which is representative of **claims 3 and 41**, a means for checking whether

the watermark is received is explained by Zhao et al in column 8, lines 4-5 by the watermark reader (123)

of the copy client. The sending of the merge command being based on the watermark command being

received is explained by Zhao et al in column 8, lines 5-9. Zhao et al explain that if the watermark is

present, then it will be displayed by the copy client. Zhao et al also explain that the copy client can

perform many functions including displaying or printing a digital representation in column 6, lines 44-47.

Thus, if the watermark is determined to be present in a digital representation, then a merge command will

be sent and the representation will be displayed (or printed) with the watermark by the copy client.

Referring to **claim 23**, which is representative of **claims 4 and 42**, a means for checking whether

a document has been tagged is explained by Zhao et al in column 8, lines 4-5 by the watermark

(corresponding to a tag) reader (123) of the copy client. The sending of the merge command being based

on the document being tagged is explained by Zhao et al in column 8, lines 5-9. Zhao et al explain that if

the watermark (tag) is present, then it will be displayed by the copy client. Zhao et al also explain that the copy client can perform many functions including displaying or printing a digital representation in column 6, lines 44-47. Thus, if the watermark (tag) is determined to be present in a digital representation, then a merge command will be sent and the representation will be displayed (or printed) with the watermark by the copy client.

Referring to **claim 26**, which is representative of **claims 7 and 45**, a means for transmitting the document and the watermark information to the printing entity is explained by Zhao et al in column 7, lines 1-5. Zhao et al explains that the original representation is embedded with a watermark before it is transmitted to the copy client (printing entity).

Referring to **claim 27**, which is representative of **claims 8 and 46**, a means for retrieving the watermark from the selected application service provider is explained by Zhao et al in column 8, lines 4-5 by the watermark reader which reads (or retrieves) the public watermark embedded in the original representation.

Referring to **claim 28**, which is representative of **claims 9 and 47**, a means for retrieving a document and at least part of the watermark information from the user is illustrated by Zhao et al by the copy server 103(i). Zhao et al explain in column 6, lines 1-7 and illustrate in figure 1 by the NWREQ signal (147) that the NWREQ signal contains the original digital representation of the document, which is received by the copy server. Zhao et al further explain that the copy client 119(j) may perform the watermarking of the document and can then transmit the watermarked document to the copy server in column 8, lines 58-65. Therefore, the copy server will retrieve the document and the watermark from the copy client.

Referring to **claim 29**, which is representative of **claims 10 and 48**, a means for transmitting the document and at least a portion of the watermark information to an application service provider corresponds to claims 28, 9, and 47. Zhao et al explain that the document and at least a portion of the

watermark (embedded within the document) are transmitted to and received by the copy server (which corresponds to the application service provider).

Referring to **claim 30**, which is representative of **claims 11 and 49**, a means for transmitting the request to the document manager including the means for receiving the request is illustrated by Zhao et al in figure 1 by the NWREQ signal (147) and the transaction manager (115) on the copy server (corresponding to the document manager). The means for selecting the application service provider is illustrated by Navarre et al in figure 3 by reference number 320. The means for forwarding the request is illustrated by Zhao et al in figure 1 by the FRESP signal (145), which contains the encrypted digital representation. The means for retrieving the document from the selected application service provider is illustrated by Zhao et al in figure 1 by the Encypter/decrypter (120) of the copy client. The means for sending the merge command is explained by Zhao et al in column 8, lines 5-9. Zhao et al explain that if the watermark is present (as detected by the watermarker/watermark reader of the copy client), then it will be displayed by the copy client. Thus, if the watermark is determined to be present in a digital representation, then a merge command will be sent and the representation will be displayed (or printed) with the watermark by the copy client.

Referring to **claim 31**, which is representative of **claims 12 and 50**, transmitting at least a portion of the watermark information to the document manager is explained by Zhao et al in column 3, lines 38-58. Zhao et al illustrate in figure 2 that the watermarked originals received by the copy server (corresponding to the document manager) contain at least one public watermark (203) and one owner identification watermark (205(1)).

Referring to **claim 34**, which is representative of **claims 15 and 53**, receiving the document from the document manager is illustrated by Zhao et al in figure 1 by the FRESP signal (145). Zhao et al explain that the FRESP contains the encrypted digital representation in column 7, lines 11-13.

Referring to **claim 35**, which is representative of **claims 16 and 54**, receiving the watermark

information form the document manager is illustrated by Zhao et al in figure 1 by the FRESP signal

(145). Zhao et al explain that the FRESP contains the encrypted digital representation in column 7, lines

11-13 and further explain that the digital representation is embedded with a watermark before it is

encrypted in column 7, lines 1-4.

Referring to **claim 36**, which is representative of **claims 17 and 55**, merging the document with

the watermark information is explained by Zhao et al in column 8, lines 5-9. Zhao et al explain that if the

watermark is present, then it will be displayed by the copy client. Zhao et al also explain that the copy

client can perform many functions including displaying or printing a digital representation in column 6,

lines 44-47. Thus, if the watermark (tag) is determined to be present in a digital representation, then the

representation will be displayed (or printed) with the watermark by the copy client.

Referring to **claim 37**, which is representative of **claims 18 and 56**, printing the document with

the watermark is explained by Zhao et al in column 6, lines 44-47. Zhao et al explain that the uses for the

digital representation include displaying, printing, copying, or playing.

Referring to **claim 65**, which is representative of **claims 58 and 72**,

i.   Means for receiving, at a centralized document manager, a request for a document from a remote

user corresponds to claim 20i.

ii.   Means for selecting, using the centralized document manager, an application service provider

amongst a plurality of application service providers based on the request corresponds to claim 20ii.

iii.   Means for retrieving the document is illustrated by Zhao et al in figure 1 by the copy server 103(i)

and the work storage 105. The copy server will extract a document from the work storage in order to

forward it to the copy client 119(i).

iv.   Means for merging a document with watermark information is illustrated by Zhao et al in figure 1

by the watermarker/watermark reader 109 of the copy server 103(i).

v.   Means for transmitting the document merged with the watermark information to the printing

entity is explained by Zhao et al in column 6, lines 44-49. One kind of use for the digital representation

of the work is explained to be printing in the copy client. Zhao et al explain that the digital representation

may contain a fingerprint watermark to identify the user when it is sent from the copy server to the copy

client in column 7, lines 1-13. Zhao et al further explain that the fingerprint watermark remains in the

digital representation as long as it is present in the copy client in column 8, lines 1-3. Thus, if the

fingerprint watermark is present in the digital representation (by being embedded by the

watermarker/watermark reader 109), then the representation will be printed with the watermark by the

copy client.

        Referring to **claim 66**, which is representative of **claims 59 and 73**, retrieving the document from

the remote user is illustrated by Zhao et al by the copy server 103(i). Zhao et al explain in column 6, lines

1-7 and illustrate in figure 1 by the NWREQ signal (147) that the NWREQ signal contains the original

digital representation of the document, which is received by the copy server.

        Referring to **claim 67**, which is representative of **claims 60 and 74**, retrieving the document from

the selected application service provider is illustrated by Zhao et al in figure 1 by the FRESP signal 145

with contains the encrypted copy of the digital representation, which is retrieved by the

encypter/decrypter 120 of the copy client 119(i).

        Referring to **claim 68**, which is representative of claims **61 and 75**, retrieving the watermark

information from the application service provider is provider is explained by Zhao et al in column 8, lines

4-5 by the watermark reader which reads (or retrieves) the public watermark embedded in the original

representation by the copy server 103(i).

        Referring to **claim 69**, which is representative of **claims 62 and 76**, retrieving the watermark

information from the remote user is explained by Zhao et al in column 8, lines 58-65. Zhao et al explain

that the copy client 119(i) may perform the watermarking of the digital representation and then transmit

the watermarked document to the copy server, thereby allowing the copy server to retrieve the watermark information from the remote user.

Referring to **claim 70**, which is representative of **claims 63 and 77**, a means for checking whether a document is tagged is explained by Zhao et al in column 8, lines 4-5 by the watermark (corresponding to a tag) reader (123) of the copy client. Merging the document with the watermark information if the document is tagged is explained by Zhao et al in column 8, lines 5-9. Zhao et al explain that if the watermark (tag) is present, then it will be displayed by the copy client. Zhao et al also explain that the copy client can perform many functions including displaying or printing a digital representation in column 6, lines 44-47. Thus, if the watermark (tag) is determined to be present in a digital representation, then the representation will be displayed (or printed) with the watermark by the copy client.

11.   Claims 5, 24, 43, 64, 71, and 78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhao et al (US 6,141,753) in view of Navarre et al (US 6,442,611), and further in view of Houser et al (US 5,606,609).

Referring to **claim 24**, which is representative of **claims 5 and 43**, a means for checking whether the document is digitally signed is not explicitly explained by Zhao et al or Navarre et al. However, Houser et al do explain verifying a document by checking whether the document is digitally signed in column 3, line 61 to column 4, line 2. The sending of the merge command being based on the document being digitally signed is not explicitly explained by Zhao et al. However, Houser et al explain in column 6, lines 24-40 that if a digital signature is correctly detected then a document will be printed with a electronic watermark. The watermark further enhances the security of the document by including information related to the signator and the document in the print out of the document. Houser et al also explain the watermark can be made imperceptible to inhibit subsequent modification of the watermark.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a watermark in a document, as done in the systems of Zhao et al and Navarre et al, when a digital signature is detected, as suggested by Houser et al, because the security and ownership of the original electronic document would be improved.

Referring to **claim 71**, which is representative of **claims 64 and 78**, a means for checking whether a document is digitally signed is not explicitly explained by Zhao et al or Navarre et al. However, Houser et al do explain verifying a document by checking whether the document is digitally signed in column 3, line 61 to column 4, line 2. Merging the document with the watermark information if the document is digitally signed is not explicitly explained by Zhao et al or Navarre et al. However, Houser et al explain in column 6, lines 24-40 that if a digital signature is correctly detected then a document will be printed with a electronic watermark. The watermark further enhances the security of the document by including information related to the signator and the document in the print out of the document. Houser et al also explain the watermark can be made imperceptible to inhibit subsequent modification of the watermark. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a watermark in a document, as done in the systems of Zhao et al and Navarre et al, when a digital signature is detected, as suggested by Houser et al, because the security and ownership of the original electronic document would be improved.

12.   Claims 13-14, 32-33, and 51-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhao et al (US 6,141,753) in view of Navarre et al (US 6,442,611), and further in view of well-known prior art.

Referring to **claim 32**, which is representative of **claims 13 and 51**,

i.   A means for scanning the document is not explicitly explained by Zhao et al or Navarre et al. However, scanning an analog representation of a document in order to obtain a digital

representation is well known in the art (official notice). Such scanning is required in order to be able to store the document on a copy server and embed a digital watermark into the document, as done by Zhao et al and Navarre et al. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to scan a document in order to obtain a digital representation of the document.

ii.   A means for transmitting the document to the document manager is illustrated by Zhao et al in figure 1 by the copy server 103(i) and the work storage 105. The copy server (corresponding to the document manager) will extract a document from the work storage.

Referring to **claim 33**, which is representative of **claims 14 and 52**, transmitting at least a portion of the watermark information to the document manager is explained by Zhao et al in column 3, lines 38-58. Zhao et al illustrate in figure 2 that the watermarked originals received by the copy server (corresponding to the document manager) contain at least one public watermark (203) and one owner identification watermark (205(1)).

13.   Claims 19, 38, and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhao et al (US 6,141,753) in view of Navarre et al (US 6,442,611), and further in view of Stefik et al (US 6,233,684).

Referring to **claim 38**, which is representative of **claims 19 and 57**, adjusting the image density of the watermark information so that the image density of the watermark information is lower than the image density of the document is not explicitly explained by Zhao et al or Navarre et al. Zhao et al do explain that the watermark should be invisible or inaudible when the digital representation is decoded in column 1, lines 47-51. Stefik et al explain that perceptually adaptive watermarks are well known in the art in column 2, lines 41-45. The intensity (corresponding to the image density) of the Digimarc watermark is explained to be varied for each digital representation in order to remain invisible in both flat

(low frequency) and detailed areas of an image (high frequency). In order for the watermark to remain invisible in the Digimarc system, it is inherent that its varied intensity would have to be lower than the intensity of digital representation it is being embedded into. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to adjust an image density for a watermark so that the density of the watermark information is lower that the image density of a document, as suggested by Stefik et al, in the system of Zhao et al and Navarre et al because the watermark will be imperceptible in the document.

Conclusion

14.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

        US 6,389,151 – Printing and Validating of Self Validating security documents: See Figure 2 elements 27 and 28, col. 4 lines 32-48.

15.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

        A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.
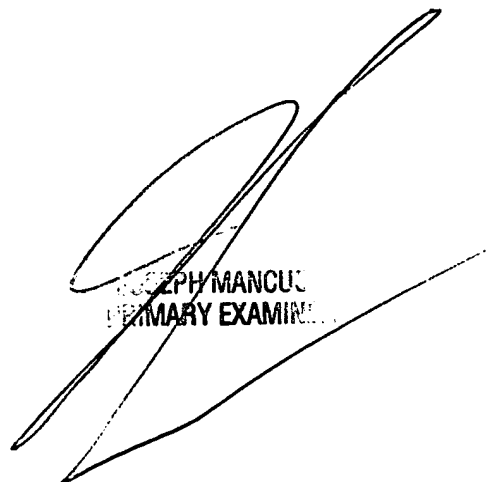
Any inquiry concerning this communication or earlier communications from the examiner should

be directed to Shefali D. Patel whose telephone number is 571-272-7396. The examiner can normally be

reached on M-F 8:00am - 5:00pm (First Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Joseph Mancuso can be reached on (571) 272-7695. The fax phone number for the organization where

this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application

Information Retrieval (PAIR) system. Status information for published applications may be obtained

from either Private PAIR or Public PAIR. Status information for unpublished applications is available

through Private PAIR only. For more information about the PAIR system, see http://pair-

direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

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Examiner
Art Unit 2621

September 5, 2005

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